

COTTON FORECASTING INSTRUCTIONS

**by W. D. Gann
(course)**

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COTTON FORECASTING INSTRUCTIONS

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1.

THE BASIS OF MY FORECASTING METHOD FOR COTTON

Mathematics is the only exact science. All power under heaven and on earth is given unto the man who masters the simple science of mathematics. Emerson said: "God does indeed geometrize." Another wise man said: "There is nothing in the universe but mathematical points." Pythagoras, one of the greatest mathematicians that ever lived, after experimenting with numbers and finding the proofs of all natural laws, said: "Before God was numbers." He believed that the vibration of numbers created God and the Deity. It has been said, "Figures don't lie." Men have been convinced that numbers tell the truth and that all problems can be solved by them. The chemist, engineer and astronomer would be lost without the science of mathematics.

It is so simple and easy to solve problems and get correct answers and results with figures that it seems strange so few people rely on them to forecast the future of business, stocks and commodity markets. The basic principles are easy to learn and understand. No matter whether you use geometry, trigonometry, or calculus, you use the simple rules of arithmetic. You do only two things: You increase or decrease.

There are two kinds of numbers, odd and even. We add numbers together, which is increasing. We multiply, which is a shorter way to increase. We subtract, which decreases, and we divide, which also decreases. With the use of higher mathematics, we find a quicker and easier way to divide, subtract, add and multiply, yet it is very simple when you understand it.

Everything in nature is male and female, white and black, harmony or inharmony, right and left. The market moves only two ways, up and down. There are three dimensions which we know how to prove -- width, length and height. We use three figures in geometry -- the circle, the square, and the triangle. We get the square and triangle points of a circle to determine points of time, price and space resistance. We use the circle of 360 degrees to measure Time and Price.

There are three kinds of angles -- the vertical, the horizontal, and the diagonal, which we use for measuring time and price movements. We use the square of odd and even numbers to get not only the proof of market movements, but the cause.

HOW TO MAKE CHARTS

Charts are records of past market movements. The future is but a repetition of the past. There is nothing new. As the Bible says-- "The thing that hath been, it is that which shall be." History repeats and with charts and rules we determine when and how it is going to repeat. Therefore, the first and most important point to learn is how to make charts correctly because if you make an error in the chart, you will make an error in applying the rules to your trading.

YEARLY CHART

You should keep a yearly high and low chart, that is, recording the extreme high and the extreme low price made during the calendar year, or the life of an option, on one line. The spacing for the price can be 25 points to each $1/8$ inch or 50 points.

MONTHLY CHART

You must always keep up a monthly high and low chart, which is the most important chart of all in determining the main trend. This chart records the extreme high and the extreme low price for the calendar month on one line, and each space or $1/8$ inch on the cross-section chart paper should represent 20 points or $1/5$ cent per pound. When prices are very high use 30 points to $1/8$ inch.

WEEKLY CHART

The next and one of the very important charts to keep is a weekly high and low chart. For Cotton you should use $1/8$ inch to represent 15 points, 30 points represent 2 weeks of time periods, and 60 points represent 4 weeks of time.

WEEKLY MOVING-AVERAGE OR MEAN POINT.

To get a weekly moving-average, we take the extreme low for the week and the extreme high for the week and divide by 2, getting the half-way or mean point for the week. This can be recorded on the weekly high and low chart or on a separate chart, recording the weekly-moving-average with a dot and using one line on the chart for each week. Importance of this Weekly Mean Point will be explained later.

THREE TO SEVEN WEEKS' MOVES

In Bull Markets, Cotton usually runs three to seven weeks with higher closings on Saturdays. After the first Saturday that prices close lower than on Monday (which would indicate that the trend is down), if it is only a reaction in a Bull Market which is to be continued, there will be only two Saturdays that the market will close lower and on the third Saturday the market will close higher (which would indicate that the trend is still up). Reverse this rule in a Bear Market. But always judge the strength or weakness by position on angles.

In rapid markets a move will run 6 to 7 weeks and have some kind of a minor reversal in trend, but often markets will continue for several months only reacting two weeks, then resting possibly two or three weeks and resuming the main trend. Often they move right on up or down in the third week. This same rule applies to daily movements. Fast markets will only move 2 days in the opposite direction to the main trend and on the third day will resume the upward or downward course in harmony with the main trend. Watch for a change in trend 84 to 90 calendar days from any important top or bottom. Also watch 84 to 90 market days from any important top or bottom. The next important time period to watch for an important change in trend is 120 days or 4 months. Use this both for calendar days and market days.

DAILY CHART

When you are trading in Cotton you should keep up a daily high and low chart, but for study purposes it is enough to keep up the weekly and monthly charts which give you the main trend. The daily chart shows the minor trend and shows the change in trend more often than the charts of a longer time period. The indications on the daily chart do not last as long and a change in trend may only run for 3 to 7 days. The scale for the daily chart is 10 points for each 1/8 inch.

No spaces are skipped on the daily chart for holidays or Sundays, therefore, the time period is for actual market days and not calendar days. However, you should carry the calendar days along at least every 2 weeks, as later, under rules for Time Periods for a change in trend; you will find that it is necessary to check up and know when the market is 30, 60, 80, 120, 135, etc. days from a top or a bottom, which means calendar days, the exact measurement of Time for the daily chart. Often the daily chart on actual daily movements comes out on an exact mathematical angle of time measurement at the same time the calendar days come out on exact time measurement, making it a doubly important point for change in trend.

RULES FOR TIME

2-Day Reaction

The opening and closing prices are very important for determining a weak or strong position as they show where the balance of power rests -- whether on the up or down side, according to Space and Time.

Signal Day

In judging the trend with the daily chart, one of the most important rules to use in a fast advancing or declining market, there will only be 2-day reactions, that is, when the market is advancing and reacts 3 full days and closes weak, it will be a signal that the minor trend has changed. Reverse this rule in a declining market. When a market reaches top, opens strong, advances to new highs in the forenoon, then declines and breaks the lows made of the opening and closes near low levels for the day, it is a signal that temporary top has been made.

A single signal day is when the market opens strong, advances to a higher level than the previous day, making a new high for the move, then sells off and closes weak near the low levels for the day, or below the low of the previous day, it is a Signal Day and indicates that the trend has reversed at least temporarily. Making a new high and closing below the half-way point of the day is also a sign of weakness.

GEOMETRICAL ANGLES

After long years of practical experience, I have discovered that Geometrical Angles measure accurately Space, Time, Volume and Price.

Mathematics is the only exact science, as I have said before. Every nation on the face of the earth agrees that 2 and 2 make 4, no matter what language it speaks. Yet all other sciences are not in accord as mathematical science. We find different men in different professions along scientific lines, disagreeing on problems, but there can be no disagreement in mathematical calculation.

There are 360 degrees in a circle, no matter how large or how small the circle may be. Certain numbers of these degrees and angles are of vast importance and indicate when important tops and bottoms occur on Cotton as well as denote important Resistance Levels. When once you have thoroughly mastered the Geometrical Angles, you will be able to solve any problem and determine the trend of Cotton.

After more than 45 years of research, tests and practical applications, I have perfected and proved the most important angles to be used in determining the trend of the Cotton Market. Therefore, concentrate on those angles until you thoroughly understand them. Study and experiment with each rule I give you, and you will make a success.

We use geometrical angles to measure Space and Time Periods because it is a shorter and quicker method than addition or multiplication, provided you follow the rules and draw the angles or lines accurately from tops and bottoms or extreme highs and lows. You may make a mistake in addition or multiplication, but the geometrical angles accurately drawn will correct this mistake. For example: If you should count across the bottom of your chart 120 spaces, which represents 120 days, weeks, or months, then you begin at "0" and number vertically on your chart up to 120; then from this top point draw a 45 degree angle moving down, this will come out at "0" on 120 points over from the beginning. If you have made a mistake in numbering, this will correct it.

Angles drawn on a chart always keep before you the position of the option and its trend, whereas, if you had a resistance point on time written down, you might mislay it or forget it but those angles are always on the chart in front of you.

The moving-average as commonly used is obtained by taking the extreme low price and the extreme high price of the calendar day, week or month, and dividing it by 2 to get the mean or average price for the day, week or month, and continuing this at the end of each time period. This is an irregular movement in spaces or points per week because at one time it may move up 5 cents per week and at another 10 cents per week, while the time period is a regular unit. Therefore, geometrical angles, which are really moving averages, move up or down at a uniform rate from any bottom or top on a daily, weekly or monthly chart.

HOW TO DRAW GEOMETRICAL ANGLES

There are three important points that we can prove with mathematics or geometry: the Circle, the Square, and the Triangle. After I have made the Square, I can draw a Circle in it using the same diameter, and with the different Squares produce the Triangle and the Square in the Circle.

The angles or moving-trend-line averages measure and divide Time and Price into proportionate parts. Refer to Form "I" where I have drawn the square of 90. You will note that this is 90 high and 90 wide -- in other words, 90 up and 90 across. It is the same as a square room which has a bottom or floor, a top or ceiling, and side walls. Everything has width, length and height.

To get the strongest and most important points in this Square, I divide it into 2 equal parts by drawing a horizontal and a vertical line. Note angle marked "A", which divides each of the smaller squares into 2 equal parts and runs from "0" to "90" diagonally. This is a diagonal line moving on a 45-degree angle and divides the large square into 2 equal parts. Then note angle "B" at "45" running horizontally across. This divides the Square into 2 equal parts. Note angle "C", which is a vertical line, running up from "45", which is one-half of "90". This crosses at the center or half-way point at "45", where the other angles cross, dividing the Square into 2 equal parts. Then note angle "D", which forms another 45-degree angle moving from the N.W. corner to the S.E. corner, crossing "45" at the exact half-way point. You see by this that if we draw the first line through the center of the square, we divide it into 2 equal parts -- then when we draw lines from the other directions, we divide it into four equal parts -- then by drawing the two lines from each corner, we divide the square into 8 equal parts and produce 8 triangles.

As you look at this Square, it should be easy for you to tell with your eye where the strongest support point is, or resistance point. It is at the center where all the angles cross. Four angles cross at this point, so naturally this would be a stronger support point than a place where only 1 angle crosses. I could divide each one of these smaller squares into 4 or 8 equal parts by drawing angles in the same way. Later, when I give you the rules and examples, I will explain how to square the Range of option, that is, the difference between the extreme low and the extreme high prices, or the difference between any low point and any high point, and also how to square the bottom price. For example: If the top is 90, the square of 90 x 90 would represent squaring the Price by Time, because if we have 90 points up in Price, and we move over 90 spaces in Time, we square the Price and Time. Therefore, when the option has moved over 90 days, 90 weeks, or 90 months, it will be squaring its price range of 90.

PATTERN CHART FOR GEOMETRICAL ANGLES

The square of 90, or the Pattern Chart, shows all the measured angles that are important to use in determining the position of an option. These angles are as follows: $3\frac{3}{4}$, $7\frac{1}{2}$, 15, $18\frac{3}{4}$, $26\frac{1}{4}$, 30, $33\frac{3}{4}$, $37\frac{1}{2}$, 45, $52\frac{1}{2}$, 60, $63\frac{3}{4}$, $71\frac{1}{4}$, 75, $82\frac{1}{2}$, $86\frac{1}{4}$, and 90 degrees.

It is not necessary to measure these angles with a protractor. All you have to do to get the angles is to count the spaces on the chart paper, using 8 x 8 to the inch, and draw the lines or angles accordingly.

On the square of 90, which you will receive with these instructions, note how equal angles drawn from the top and from the bottom prove themselves by the point at which they cross. For example:

The angle of 8 x 1 drawn from "0" and the angle of 8 x 1 drawn from "90" down both cross at 45, $5\frac{5}{8}$ points over from "0" counting to the right. Then, the angle of 4 x 1 from "0" and the angle of 4 x 1 down from 90, you will notice, cross at $11\frac{1}{4}$ on 45, equal distance from the other angle and twice the measure. The reason these angles prove this way is because the 45 degree angle or 45 periods of time from "0" to 45 is one-half of 90. Therefore, parallel angles beginning at "0" going up and at 90 coming down, must cross on a 45 degree angle or at the gravity center.

HOW TO DRAW ANGLES FROM A LOW POINT RECORDED BY COTTON FIRST IMPORTANT GEOMETRICAL ANGLE

The first, and always the most important, angle to draw is a 45 degree angle or a moving-average that moves up 10 points per-day, 15 points per week, or 20 points per month. This is a 45 degree angle because it divides the Space and Time Periods into two equal parts. As long as the market or option stays above the 45 degree angle, it is in a strong position and indicates higher prices. You can buy every time it rests on the 45 degree angle with a stop-loss order 10, 20 or 30 points under the 45 degree angle, but remember the rule: Never use a stop-loss order more than 50 points away. Unless Cotton is near the low levels or just starting in a Bull Market or selling at a very low price, I always use a stop-loss order 10 points under the 45 degree angle. If this angle is broken by 10 points, you will usually find that the trend has changed at least temporarily and the option will go lower.

An easy way to calculate accurately how to put on this 45 degree angle is:- For Example: If the time is 30 days, 30 weeks or 30 months from the point where the option was bottom, the angle or 45 degrees must be 300 points up from the bottom and would cross at 30/8. This is one of the easiest angles to put on and one of the simplest to learn. You can beat the market by trading against the 45 degree angle alone if you stick to the rule: Wait to buy on the 45 degree angle or wait to sell it against the 45 degree angle.

SECOND IMPORTANT ANGLE -- 2 x 1

This angle moves up at the rate of 20 points per day or 2 spaces of price for 1 period of time. On the monthly chart it would move up 40 points per month and on the weekly chart it would move up at the rate of 30 points per week. The space between the 45 degree angle and the vertical angle divided into 2 parts makes the angle of 2 x 1 measure $63\frac{3}{4}$ degrees. That is why it is the next strongest angle above the 45 degree angle. As long as an option holds above this angle it is in a very strong position because this angle is more acute than the 45 degree angle. When an option breaks under this angle it is in a weaker position and indicates that it will go lower and the next support angle is the 45 degree angle. The longer period of time which has elapsed from the low level to the high level, the greater the decline will be because the angles have spread further apart.

Remember the rule of all angles: No matter what angle the option breaks under, it indicates a decline to the next angle below it.

THIRD IMPORTANT ANGLE -- 4 x 1

This angle -- which is still stronger as long as the price of Cotton holds above it -- is the angle which moves up 40 points per day, week or month. This angle is 4 x 1, or 4 points of Space equal 1 period of Time. It measures 75 degrees and divides the space between the angle of 2 x 1 and the 90 degree angle into two equal parts. Any option that continues to advance 40 points per day, 60 points per week, or 80 points per month, and remains above this angle is in a very strong position as long as it stays above it, but when it breaks under, it indicates the next angle or next support point according to the position of the option in Time.

FOURTH IMPORTANT ANGLE -- 8×1

The angle of 8×1 or the one that moves up 8 spaces per day, week or month, measures $82\frac{1}{2}$ degrees. As long as an option can hold above this angle on daily, weekly or monthly charts, it is in the strongest possible position; but when it reverses trend and declines below this angle, then it indicates a decline to the next angle.

You will note that with these four important angles we show the strong or bullish side of the market. All the Time by dividing the Space with angles we are getting the half-way point or the gravity center of Time and Price.

These are all the angles you need as long as an option continues to advance and work up and holds above the angle of 45 degrees or the moving-average of 10 points per day, 15 points per week or 20 points per month.

While there are 360 degrees in a circle and angles can form at any of these degrees, all of the important angles form between "0" and "90" because 90 is straight up and down and the most acute angle on which an option can rise. For Example: The 45 degree angle divides the space from "0" to "90" in half. The angle of 135 degrees is simply another angle of 45 degrees because it is one-half of the next quadrant between 90 and 180. 225 and 315 in a circle are also 45 degree angles. Therefore, all of the angles valuable in determining the trend of an option are found between "0" and "90" degrees. When we divide 90 degrees by 8 we get $11\frac{1}{4}$, the next important angle to use -- then divide it by 3 and we get 30 degree and 60 degree angles, which are important to use for Time and Resistance Points.

KIND OF BOTTOMS FROM WHICH ANGLES OR MOVING-AVERAGE LINES ARE TO BE DRAWN

DAILY CHART

If an option has been declining for some time -- then starts to rally (by rallying from a bottom it must make higher bottoms every day and higher tops) -- then after a 3-day rally on the daily high and low chart, you can put on the 45 degree angle and the angle of 2×1 from the bottom or low point. As a rule, it will be necessary to put on these two angles at first. If this bottom holds and is not broken, then you can put on the other angles from the bottom.

WEEKLY CHART

If an option is declining and reacts for more than one week and continues down, we will say, for three weeks or more, then starts to rally and advances two weeks or more, you would start to put the angles on from the low point of the decline, only using the angles above the 45 degree angle until the option again breaks under the 45 degree angle - after that you would use the other angles on the lower or bearish side of the Square.

WHAT TO DO AFTER THE 45 DEGREE ANGLE FROM BOTTOM IS BROKEN

After an option makes top, either temporary or otherwise, and breaks under the 45 degree angle and starts moving down, then, the first thing you do is draw angles below the 45 degree angle, starting from the bottom or low point. Note example: Angles Drawn on Monthly, Weekly and Daily Charts.

FIRST ANGLE ON BEAR SIDE OF THE SQUARE -- 2 x 1

The first angle that you draw on the bear side of the Square is the angle of 2 x 1 or 2 points over and 1 point up, on a daily chart this would be moving up at the rate of 5 points per day or $1/2$ the rate of the 45 degree angle. This angle measures $26-1/4$ degrees. This same angle on a weekly chart would move up at the rate of $7-1/2$ points per week, and on a monthly high and low chart, based on the scale of $1/8$ inch to 20 points, this angle would be moving up at the rate of 10 points per month. This is the support angle which the option should reach after it breaks under the 45 degree angle. As a general rule when the option reaches this angle it will receive support and rally but you should always consider the time period and the main cycle the market is working in and, also, see if there are resistance levels crossing at the same price level where the angle is. Some time it will rest on this angle for a long period of time that is holding the angle and making higher bottoms, but when this angle of 2 x 1 is broken on a daily, weekly or monthly chart the next angle to watch is the angle of 4 x 1.

SECOND IMPORTANT ANGLE -- 4 x 1

The next important angle on the bear side of the Square, which moves up at the rate of $2-1/2$ points on the daily chart, is the angle of 4 x 1 measuring 15 degrees. It will be the next strong support angle which the option should get support and rally from.

THIRD ANGLE -- 8 x 1

Then, after the 4 x 1 angle is broken, the next important angle you will place on your chart is the angle of 8 x 1, which moves at the rate of 1-1/4 points per day, 3-3/4 points per week, or 5 points per month, and measures 7-1/2 degrees. This is often a very strong support angle. After an option has had a big decline, it will often rest on this angle several times or may make final bottom and start up from this angle, crossing other angles and getting back into a strong position again. Therefore, this angle is important to use on a monthly or weekly chart after a prolonged decline.

This completes all of the angles that you will need to use from any bottom at any time.

HOW TO DRAW ANGLES FROM TOPS ON DAILY, WEEKLY OR MONTHLY CHARTS

POSITION UNDER 45 DEGREE ANGLE DRAWN FROM TOP

After an option has made top and declined for a reasonable length of time, say, three days, three weeks or three months, breaking previous bottoms, then you start to draw angles from the top. Note Example: Angles on Monthly Charts.

45 DEGREE ANGLE FROM TOP

The first angle you draw is the angle of 45 degrees or a moving-average which indicates a decline of 10 points per day, 15 points per week, or 20 points per month. As long as the option is below this angle it is in the weakest position and in a Bear Market.

OTHER ANGLES

In many cases an option will start declining on an average of 10 to 40 points per day and sometimes will decline the limit of 200 points per day. In cases of this kind, when the market is very active you should put on all of the other angles from the top which move down faster than the angle of 45 degrees.

WEAKEST POSITION

The option is in the weakest possible position when it declines and keeps under the angle of 8 x 1. It is in the next weakest position when it is dropping down at the rate of 40 points per day, 60 points per week, or 80 points per month, or under the angle of 4 x 1. It is in its next weakest position when it is dropping down under the angle of 2 x 1.

STRONGEST POSITION

The option is in a stronger position and indicates a better rally when it crosses the angle of 2×1 ; but this depends on how far it is down from the top and how far the angles are apart, as will be explained later under the rules.

CHANGING TREND

As long as an option is declining 10 points per day, 15 points per week, or 20 points per month, or falling below or under the 45 degree angle, it is still in a Bear Market and in a very weak position. When an option rallies and crosses the angle of 45 degrees after a prolonged decline, you are ready to put on the angles on the other side of the 45 degree angle, which shows that the option is in a stronger position in a Bear Market and may be getting ready to change into a Bull Market.

POSITION ABOVE 45 DEGREE ANGLE DRAWN FROM TOP 2×1 ANGLE FROM TOP

The first angle or moving-average you draw after the 45 degree angle from the top is crossed and after the option indicates it has made a temporary bottom that is the angle of 2×1 , moving over 5 points and down 1 point, or 5 points per unit of Time. This is moving down at the rate of 5 points per day, $7\frac{1}{2}$ points per week, or 10 points per month.

 4×1 ANGLE

The next is the angle of 4×1 which moves down at the rate of $2\frac{1}{2}$ points per day, $3\frac{3}{4}$ points per week, or 5 points per month.

 8×1 ANGLE

The next angle is the angle of 8×1 which moves down at the rate of 1 point every 8 days, 8 weeks or 8 months, or $\frac{1}{8}$ point per Time Period.

STRONG POSITION

After the option has crossed the angle of 45 degrees and rallied up to the angle of 2×1 , it will meet selling and react to some angle coming up from the bottom of the last move, but it is in a stronger position when it holds above this angle of 2×1 , and it is in the next strongest position when it crosses the angle of 4×1 . Crossing the angle of 8×1 , which is of least importance, it indicates that it is in a very strong

position again from the top. You must always consider a movement coming up from the bottom and its position on angles from the bottom to determine its strength. It is important to consider the number of points it has moved up from the bottom and how many points it is down from the top.

This completes the forms of all the angles that you will need to use at any time from tops or bottoms. Practice putting these angles on tops and bottoms until you are thoroughly familiar with them and know that you are getting them absolutely accurate. Then, you can begin to study the rules for determining the trend according to the position of the option on angles..

DOUBLE AND TRIPLE TOPS OR BOTTOMS

ANGLES CROSSING EACH OTHER

When there is a double bottom several days, weeks or months apart, you draw angles from those bottoms, which are near the same price levels. For Example: From the first bottom, draw a 45 degree angle and from the second bottom, draw an angle of 2 x 1 -- then, when these angles cross each other, it will be an important point for a change in trend.

Apply this rule to double tops and triple tops in the same way. It is not necessary for the tops or bottoms to be exactly at the same price level, but near the same price level. For Example: If an option makes one top and the next top is 30 points lower, you would consider it a double top in the same way, if bottoms are 20 or 30 points apart, you would consider them double bottoms,

Angles coming down from tops and crossing angles coming up from bottom are very important for a change in trend when they cross each other.

Always watch the 45 degree angle from any important top and bottom and from the last swing top and bottom from which the market starts up or down. Breaking of the first important angle indicates the first change in trend. Breaking the last 45 degree angle from the last extreme low level, from which a 45 degree angle is drawn, is most important and crossing the 45 degree level in the last high level is very important for a major change in trend; especially on the monthly chart.

GEOMETRICAL ANGLES OR MOVING-AVERAGE LINES DRAWN FROM ZERO

When an option reaches bottom and starts up, you have been instructed to draw angles from this exact low point, which shows the support in Time Periods, but there are other angles which, later on, will be just as important and sometimes more important than the angles drawn from the bottom of an option. These are the angles that begin at "0" or zero, and move up at the same rate that they move up from the bottom. The starting point must be on the same line that the bottom is made on as the Time Period begins from this bottom, but the angles move up from "0". These angles should be started every time an option makes a bottom, especially on weekly and monthly charts, and should also be carried up on important movements on the daily chart.

If an option makes low at 515, which was the low on October Cotton, June 9, 1932; as shown on the chart, starting the 45 degree angle from "0", when will this angle reach 515? Answer: It will reach 515 in 51-1/2 days, 34-1/3 weeks, or 25-3/4 months from the bottom or its starting point. In other words, in 51-1/2 days, 34-1/2 weeks, or 25-3/4 months, it will be up to 515 from "0" and at the price where the option made bottom. Then, the angle will continue on up at the same rate and later, when the option breaks under the 45 degree angle from the actual bottom made at 515 and breaks the other support angles drawn from the actual bottom at 515, the next important point for support will be the angle of 45 degrees moving up from "0". When this angle is broken, it is in the weakest possible position and indicates much lower prices, but this depends on how high the option is selling and how much it has declined at the time it breaks the 45 degree angle from "0". These angles drawn from "0", especially the 45 degree angle, prove when Price and Time are balancing, or when the option is squaring out Time from its bottom.

SQUARING TOPS AND BOTTOMS OR EXTREME HIGH AND LOW LEVELS

From each high price or low price the market squares out in Time and balances price and time, as shown by the geometrical angles.

Example: 1932, June 9, October Cotton low was 515. To square this on the daily chart would mean 51-1/2 days at 10 points per day. This can be used as market days and also as calendar days. The squares can be carried across the chart so you will know when each Time Period runs out and each square ends and a new square begins.

Each important higher bottom should be used for squaring out with Time. December 10, 1938, October Cotton low 728. November 29, 1943, October Cotton low 1812. November 7, 1946, October Cotton low 2307.

The highest levels or tops must also be squared out on weekly or monthly charts, which are more important Time Periods. October 3 and 9, 1946, October Cotton reached the extreme high price of 3928. This is the most important high level to use for squaring out time on the weekly and monthly charts.

To get the time required to square any low point on a weekly chart, divide by 15. Dividing 515 by 15 gives $34\frac{1}{3}$ weeks to square out this low level. This Time Period, for the end of each square, should be placed on your chart all the way across so that you will know at the present time what square in time the market is working.

To get the resistance levels in price for the top of the square, first, add 515 to 515 which gives 1030. This would be the end of the first square in price. The second square in price would end at 1545 and the fourth square at 2060. Continue these squares up from the low level until the price reaches the high of 3928.

To square 515 on a monthly chart, divide 515 by 20 which gives $25\frac{3}{4}$ months, the time required on the monthly chart to square the extreme low price. You can use 26 months or the even figure and carry this across on your charts to see what square the price is working in at any future date. Also, carry across the square of 728, 1812 and 2307, the important low levels. The next in importance is to square out the extreme high price of 3928. You divide this by 20. This would give 196 months, with 8 points over, which would equal approximately $196\frac{1}{2}$ months, to complete the square of 3928. Divide $196\frac{1}{2}$ by 2 to get $\frac{1}{2}$ of the square in Time. This would give $98\frac{1}{4}$ months. Divide by 4 to get $\frac{1}{4}$ of the Time Period. Next, divide by 8 to get $\frac{1}{8}$ of the Time Period. This would give $24\frac{1}{2}$ months, making this Time Period important because it is the end of two years where important changes take place.

Also divide the time period of $196\frac{1}{2}$ months by 3, which would give $65\frac{1}{3}$ months and an important time period. Another reason why this would be important is that $5\frac{1}{2}$ years equals 66 months. Next, $\frac{2}{3}$ of the Time Period would give approximately 131 months. Another reason why this is an important Time Period for a change in trend is that 132 months is 11 years.

THREE IMPORTANT TIME PERIODS FROM WHICH TO SQUARE THE

We have already referred to squaring the extreme low levels and extreme high levels with Time. The third is the squaring of the range between extreme high and extreme low prices. Example: October Cotton 3928 high and 515 extreme low gives a range of 3413. To square this price range on the monthly chart, divide 3413 by 20. This gives 170-1/2 months. Then, divide 170-1/2 by 2, 3, 4 and 8 to get the 1/2, 1/4, 1/8 and 2/3 points. Watch these periods for important changes in trend, applying the seasonal trend, and major and minor time cycles, as well as the geometrical angle, and watch for important change in trend. Example: 1/2 of 170-1/2 is 85-1/4 months. There is another reason why this would be important for a change in trend, that is, the 7-year cycle or 84 months.

It is also important to square the range between 728, the low on October Cotton in 1938, and 1812 the low in 1943, and 2307 the low in November, 1946.

These squares should be marked on the bottom of your chart, when the time period is squaring out low levels, and mark across the top of the chart, when the time period is squaring out the extreme high levels.

The calendar year can be divided into 8 equal time periods and into 1/3 and 2/3 time periods. But, you must remember that in using time periods to forecast the Cotton market the time must start from the exact dates of high and low prices. Starting with the extreme low, June 9, 1932, you would add 45 days, 90 days, 120 days, 135 days, and 180 days to get the important Time Period, or the proportionate part of one year's time from the extreme low. From the extreme high of October 3 and 9, 1946, you would add the time periods in weeks to see when the time was running out from this top, and watch for important changes in trend.

ZERO ANGLES STARTING AT THE TIME TOP IS MADE

When an option reaches extreme top on a daily, weekly or monthly chart, and the trend turns down, you should start an angle of 45 degrees from "0", moving up from the exact date that the top is made. This will prove the square of the Time Period. It is very important when this angle is reached and it indicates a change in trend. It is the last strong support and when broken, it will indicate much lower prices.

I have instructed you in each case to first draw the 45 degree angle from bottom, top, and from "0" at bottom and top, but this does not mean that you must not use the other angles.

All of the other angles can be used from "0", but the 45 degree angle is the first and most important. After this angle is broken, you can use the other angles. It is not necessary to carry all of them along until you need them, but on the monthly chart, after a long series of years, these other angles should be carried along when the option begins to approach the levels where they would be broken, or where the option would rest on them and receive support.

OUTSIDE OR EXTREME LOW 45 DEGREE ANGLE

This angle is of great importance because it is the last support from the last starting point, beginning with the low in 1932, the 45 degree angle was broken and prices went lower. January, 1936, low for October Cotton was 980. The advance started and reached high March 10, 1937, at 3395. The 45 degree angle drawn from 980 was broken and the trend continued down until December 10, 1938, when the low was reached at 727. From this low level the main trend turned up. The important 45 degree angle moving up was drawn from this bottom. In 1939, between July and November, there was a series of lows at 900. A 45 degree angle starts at 9 cents in November, 1939, which was a higher bottom than December, 1938.

1940, May low for October Cotton, 840. A 45 degree angle starts from this low which was higher than the previous bottom.

1940, October low on the option for delivery in 1941 was 870. A 45 degree angle was drawn from this low. The advance started and continued on the up-trend making higher bottoms and higher tops until October, 1946, when extreme high was reached at 3928, just below the 45 degree angle from 870, which meant that price and time had balanced on the monthly high and low chart. After extreme high was reached and the big smash took place, when Jordan of New Orleans was in trouble, and prices were declining the limit of 200 points per day, and 45 degree angles were broken, you would look to see where the last support was on an outside 45 degree angle. The angle of 45 degrees, moving up at the rate of 20 points per month from October, 1940, crossed at 2340 in November, 1946.

Next, the important half-way point must be considered. From the low of 727, in 1938, to the high of 3928, in October, 1946, the half-way point is 2328. From this you can see that the 45 degree angle crossed at 2340 and the half-way point was 2328. Our rule is that lost motions and momentum can carry prices to about 30 points below a 45 degree angle, or below the main half-way point.

November 7, 1946, October Cotton sold at 2307, just 20 points below the half-way point and 35 points under the 45 degree angle, but it closed the same day very much above the half-way point and the 45 degree angle.

This writer, with the knowledge that the 45 degree angle and the half-way point should be bottom and a strong support point, bought several thousand bales of Cotton, some of it at the extreme low level, and made substantial profits on the rise. This proves to you the value of having the angles on from all important tops and bottoms.

After the 45 degree angle from the outside low level is broken the next important support angle is the 45 degree angle moving up from zero. Starting a 45 degree angle from 0, December, 1938, when October Cotton was low at 728, this angle crossed or reached a price of 2520 in June, 1949, making this a strong support and buying point. June 7, 1949, October Cotton sold at 2485 and closed the month far above this angle. The advance continued reaching 2982 in February, 1950, the time of this writing. If you did not know how to use this 45 degree angle from "0" you would not know that there was a support point around 2520 to 2480. Note that the low in May, 1947, was 2450, and that the option for delivery in the year 1950 made a higher bottom than the option for delivery in 1948.

By looking at the Time Periods you will note that June 9, 1949, was 17 years from June 9, 1932. Therefore, you would watch for a change in trend on June 9, 1947, and the low was reached 2 days before this date and by June 9, 1949, the price had moved up to 2510, and continued to advance.

I wish to emphasize the fact that keeping up all the Resistance Levels, and having all the Time Periods on your chart, and the geometrical angles from all important tops and bottoms brought up to date, will enable you to determine these safe buying and selling points from which you can make a fortune in a short period of time by sticking strictly to the rules and eliminating all guess work and trading on mathematical science, and not on hope.

45 DEGREE ANGLE FROM ZERO TO TOP AND BOTTOM

When a 45 degree angle, moving up from "0" reaches the line or price of the bottom, it is very important -- then; again when it reaches the point of the extreme high price, it is very important for a change in trend.

You should carry 45 degree angles and other angles up from "0" from all important first, second and third higher bottoms, especially those where very much time has elapsed between these bottoms. You should also start the angle of 45 degrees up from "0" from the first, second and third lower tops, especially those which show much time period elapsed. These angles are the most important to be carried on the weekly and monthly charts.

Never overlook keeping up the angles from "0" because they will tell you when Time is squaring out with Price from tops and bottoms and will locate support angles or moving-average lines at a point on the bear side after the first 45 degree angle from a bottom is broken. You could not locate this support point in any other way except by the angles from "0"

You should go back over past records and bring up these angles and square out different tops and bottoms so that you can prove to yourself the great value of using these angles.

W. D. GANN

February 18, 1950

RESISTANCE LEVELS

If we wish to avert failure in speculation we must deal with causes. Everything in existence is based on exact proportion and perfect relation. There is no chance in nature because mathematical principles of the highest order lie at the foundation of all things. Faraday said: "There is nothing in the Universe but mathematical points of force."

Every Cotton option makes a top or bottom on some exact mathematical point in proportion to some previous high or low level.

The movement of an option between extreme high and extreme low, either in a major or a minor move, is very important and by a proper division of this range of fluctuation, we determine the points where resistance or support will be met on a reverse move, either up or down. By carefully watching these Resistance Levels in connection with your Trend Lines, you can make a greater success and trade with closer stop-loss orders. You can tell by the Resistance Points why Cotton should receive support or meet selling at old tops or bottoms.

RANGE OF FLUCTUATIONS

1/8 POINTS

Take the extreme low and extreme high of any important move; subtract the low from the high to get the range; then, divide the range of fluctuation by 8 to get the 1/8 points, which are Resistance Levels or buying and selling points. When an option stops around these levels and makes bottom or top on or near them and shows a turn on the Trend Line, this is the place to buy or sell. Sometimes the market will hold for 3 to 7 days, making bottom or top around these important Resistance Levels, and, at other times, may hold for several weeks around them.

1/8 and 2/3 POINTS

After dividing an option by 8 to get the 1/8 points, the next important thing to do is to divide the range of fluctuation by 3 to get the 1/3 and 2/3 points. These 1/3 and 2/3 points are very strong, especially if they fall near other Resistance Points of previous moves or when they are divisions of a very wide move.

HIGHEST SELLING PRICE

Next in importance is the division of the highest price at which any option of Cotton ever sold and each lower top.

Divide the highest selling price by 8 to get the $1/8$ points and, also, divide by 3 to get the $1/3$ and $2/3$ points.

This is very important as an option, after breaking the half-way point of the fluctuating range, will often decline to the half-way point of the highest selling price, and will also work on the other Resistance Points in the same way.

When the market is advancing it will often cross the half-way point of the highest selling point, and then advance to the half-way point of the fluctuation and meet resistance.

MOST IMPORTANT COTTON MOVEMENTS TO CONSIDER

The first and most important point: Consider the Resistance Levels between the extreme high and extreme low of the life of an option.

Next, Resistance Points or divisions of the highest price at which the option has ever sold.

Then, consider the fluctuation of each campaign which runs one year or more. Take the range between extreme high and extreme low and divide into 8 equal parts to get the Resistance Points.

Lastly, take a third or fourth lower top and divide it by 8 to get the Resistance Points.

Example:

October Cotton -	515 to 3725	high 1920;	low 1932
	727 "	3928 "	1946; "
	1812 "	3928 "	1946; "
	2307 "	3928 "	1946; "
	2307 "	3560 "	July 16; '47; low Nov. '46
	2307 "	3490 "	May 17; '48; " Nov. '46
	2460 "	3560 "	July 16, '47, " May '47

ORDER OF RESISTANCE LEVELS

When an option is advancing and crosses the $1/8$ point, the next important point to watch is the half-way point ($1/2$ point) or gravity center, or the average of the move or fluctuation.

The next point above the half-way point is the $5/8$ point.

The next and strongest point after the half-way point is crossed is the $3/4$ point.

Then, if the range is very wide, it is important to watch the $7/8$ point of the move. This will often mark the top of an advance.

But in watching these Resistance Points, always watch your Trend Lines on the Weekly Chart and follow rules given on Formations. If the option starts making tops or bottoms around these Resistance Points, it is safe to sell or buy.

THE AVERAGE OR HALF-WAY POINT

Always remember that the 50% reaction or half-way point of the range of fluctuation, or of the extreme highest point of an option, or any particular move, is the most important point for support on the down side or for meeting selling and resistance on the way up. This is the balancing point because it divides the range of fluctuation into two equal parts.

To get this point, add the extreme low of any move to the extreme high of that move and divide by 2.

When an option advances or declines to this half-way point, you should sell or buy with a stop-loss order 10, 20, or 30 points according to whether the option is selling at very high or very low levels.

The wider the range and the longer the time period, the more important is this half-way point when it is reached.

You can make a fortune by following this one rule alone.

A careful study and review of past movements in any option will prove to you beyond doubt that this rule works and that you can make profits following it.

Buy or sell at the most important half-way point of the major move and place stop-loss orders 10 to 30 points under the half-way point or 10 to 30 points above the half-way point. By major moves we mean the half-way point between the extreme low and extreme high, when the range runs 250 to 300 points or more. A minor half-way point would be the $1/2$ point between a minor top and a minor bottom. Reactions usually run back half of the last move or to the half-way point.

When the range between the $1/2$ point and the $5/8$ point is 150 to 200 points or more, and the option crosses the half-way point, it will go to the $5/8$ point and meet resistance and then react or decline. The $5/8$ point is a very important point to

watch for top or reaction. An option will often react from the 5/8 point back to the half-way point and be a buy again.

The same rule applies when an option is declining. If the range is 100 to 200 points or more between the 1/2 point and the 3/8 point, then the option breaks the half-way point, and it will decline to the 3/8 point and make bottom and rally to the 1/2 point, or higher.

When an option advances to a half-way point and reacts several points from this level, then finally goes through it, you can expect it to make the next resistance point indicated on your Resistance Level card, or the next old top.

The same applies when Cotton declines and receives support several times on a half-way point, then breaks through it. It will then indicate the next resistance point on your Resistance Level card, or the next important bottom.

The greatest indication of strength is when a Cotton option moves 20 or more points above the half-way point, which shows that buying or support orders were placed above this important Resistance Level.

A sign of weakness is when an option advances and fails to reach the half-way point by 20 or more points, then declines and breaks the Trend Line, or other Resistance Points.

NEXT RESISTANCE LEVELS AFTER THE MAIN HALF-WAY POINT HAS BEEN BROKEN

The next Resistance Level to watch after the main half-way point has been broken is the next half-way point of some previous move. By main half-way point I mean, the half-way point of the extreme fluctuating range of the life of an option.

Another very important Resistance Level after the main half-way point is crossed is the half-way point or 1/2 of the highest selling price. This is a stronger support level than the half-way point of minor fluctuating moves because it cuts the highest selling price in half, and is a strong buying or selling point, until it is crossed by 10, 20 or 30 points according to the price of the option, whether it is very high-priced, medium or low-priced.

In the last stages of Bull or Bear Campaigns use only the half-way point of short or minor moves. It is most important to watch the Resistance Levels of the final move, which may run several weeks or months, particularly the half-way point. When it is exceeded by 30 full points, the trend usually reverses.

LOST MOTION

As there is lost motion in every kind of machinery, so there is lost motion in the Cotton market due to momentum, which drives an option slightly above or below a Resistance Level. The average lost motion is 30 to 40 points, depending upon the activity of the market.

When Cotton is very active and advances or declines fast on heavy volume, it will often go from 20 to 40 points above a half-way point or other strong Resistance Level and not go 50 points. The same rule applies on a decline. It will often pass an important Resistance Point by 20 to 40 points but not go 50 full points beyond it.

This is the same rule that applies to a gravity center in anything. If we could bore a hole through the earth and then drop a ball, momentum would carry it beyond the gravity center, but when it slowed down, it would finally settle on the exact center. This is the way Cotton acts around these important centers.

A study of the Resistance Levels between bottoms and tops of individual options will prove how accurate the market works out to these important points.

W. D. GANN.

February 18, 1950

FORECASTING COTTON BY TIME CYCLES

TIME CYCLES

Every movement in the market is the result of a natural law and of a cause which exists long before the effect takes place and can be determined years in advance. The future is but a repetition of the past, as the Bible plainly states: The thing that hath been, it is that which shall be; and that which is done, is that which shall be done, and there is no new thing under the sun. --Eccl. 1:9.

Everything has a major and a minor, and in order to be accurate in forecasting the future, you must know the major cycle, as the most money is made when extreme fluctuations occur.

Great Cycles

Never overlook the great cycles which mark extreme high and low prices which occur over a long period of time.

82 to 84 years. This is one of the great cycles in Cotton and it is running out 82 years from 1864; the extreme high point, and Cotton should be high between July 9, 1946, and October 5 to 8, 1946; according to this cycle and the main trend run-down for several years following these extreme high prices... This is what the cycle indicated.

90-Year Cycle

This is three times the 30-year cycle and two times the 45-year cycle, and is important to watch for extremes. 1954 will be 90 years from 1864. You can also check back against extreme low points, and see how the cycle works out 90 years later.

60-Year Cycle

The circle equals 360 degrees and the main Cotton cycle is 360 months or 30 years. You should always use this cycle of 30 years and the proportionate parts of it. The 60-year cycle is twice the 30-year cycle. Example: High on Cotton 1864; low 1894; high 1923-24, 30 years from the bottom, completing the 60-year cycle.

49-50 Year Cycle

A major cycle in Cotton occurs every 49 to 50 years. A period of "jubilee" years of extreme high or low prices, lasting from 5 to 7 years, occurs at the end of the 50-year cycle. "7" is a fatal number referred to many times in the Bible, which brings about contraction, depression and panics. Seven times seven equals 49, which is known as the fatal evil year, causing extreme fluctuations.

30-Year Cycle

This is the main cycle, as stated above, and the minor cycles are proportionate parts of the 30-year cycle or circle:

30	years	-	or	360	months
22-1/2	"	is	3/4	or	270 "
20	"	"	2/3	"	240 "
15	"	"	1/2	"	180 "
13	"	"	"	"	156 "
10	"	is	1/3	"	120 "
9	"	"	"	"	108 "
7-1/2	"	is	1/4	"	90 "
5	"	"	1/6	"	60 "
3-3/4	"	"	1/8	"	45 "
1-7/8	"	"	1/16	"	22-1/2 "
2-1/2	"	"	1/12	"	30 "
			1/32	"	11-1/4 "

20-Year Cycle

The next important cycle is the 20-year cycle, which is 2/3 of the 30-year cycle.

15-Year Cycle

This is the next in importance because it is 1/2 of the 30-year cycle.

13-Year Cycle

This cycle is very important as you can see later by the examples against previous years. You can prove for yourself by checking and adding 13 years to any important top or bottom.

10-Year Cycle

The next important major cycle is the 10-year cycle, which is 1/3 of the 30-year cycle and 1/2 of the 20-year cycle. This produces fluctuations of the same nature and extreme high or low every 10 years.

Odd Cycles

These are the 9 and 13 year cycles. The market often makes important tops and bottoms on these cycles, as the record will show. For 9 years; check 1918 to 1927, 1923 to 1932, 1932 to 1941, 1937 to 1946, 1934 to 1943, 1941 to 1950, 1920 to 1929, 1938 to 1947, and 1945 to 1956.

Minor Cycles

These are the 5, 3, 2 and 1-year cycles. The smallest cycle -- 1-year -- will often show a change in the 10th or 11th month. Cycles do not always come out in even months. Follow swings on daily, weekly and monthly angles.

Example: Note on the swing chart that in 1824 Cotton sold at 30 cents a pound; then followed a long decline, reaching 7 cents a pound in 1831 and 1832. It advanced to 20 cents a pound in 1835 and 1836. In 1843, 1844, 1845 and again in 1848, it sold at 5 cents a pound. Fifty years later, in 1893 to 1898, it sold at 5 cents a pound.

The extreme high price for Cotton was reached August 23, 1864, when it sold at \$1.89 a pound. Thirty years later, in 1893 and 1894, it reached the extreme low price of 5 cents. Fifty years from the extreme high, or 1914, prices were around 6-1/2 cents per pound, from which the great "jubilee" period with seven years of high prices followed at which time Cotton advanced to 43.75 cents a pound in 1919 and 1920. Note that from 1864 to 1872 extreme high prices for Cotton prevailed.

You can easily see the working out of the 30, 20 and 10-year cycles from the swing chart, which gives you over 140 years of prices. The July chart on Futures from 1869 to date will show you the 60, 30, 20, 15, 10 and minor cycles.

Regardless of whether the market is running out a 5, 10, 20, or 30, 60, 82, 84 or 90-year cycle, it seldom moves more than three years in either direction without a reverse movement. Campaigns often end in the 18th month. The 22nd and the 23rd months are important for culminations, as you can see by going back over the charts. Also watch 27, 28, 30 and 36 months for culminations.

WAR MARKETS

Study all movements after a war starts until 1 or 2 years after the war is over, and compare one war period against another war period or cycle. Example: 1861 to 1865, 1914 to 1920, 1939 to 1945.

During the war periods watch for an important change in trend to occur near the 10th and 12th months, from tops and bottoms.

Each cycle -- either major or minor -- should be divided by $1/8$, $1/4$, $1/2$, $3/4$, $1/3$ and $2/3$ to determine important dates for change in trend. Also, divide prices from high to low for space movements.

13-Year Cycle

In making up a forecast on Cotton, consider all the major and minor cycles but do not overlook the fact that there is an 82-84-90-year extreme cycle in Cotton, which you must consider from any extreme high or low point, such as the extreme high in September, 1864, and the extreme lows in 1844, 1848, 1894, 1932 and 1933. In addition, the 13-year cycle must be considered. Cotton works out remarkably accurate on the 13-year cycle because around the 13 years there is an extremely large, or an extremely short crop. This causes extreme fluctuations in Cotton. Go back over the past record of prices and you will see how extremes have occurred 13 years apart, as follows:

1804	low	to	1817	high (13 years later)
1817	high	"	1829-31	low
1822	low	"	1835	high (extreme high)
1825	high	"	1838	low
1835	high	"	1838	low
1844-45	low	"	1857	high
1848	low	"	1861	high (began the big advance due to beginning of the Civil War)
1851-52	last lows before big advance started; then in 1864 -- 13 years later -- extreme high of history was reached. Cotton sold at \$1.89 a pound.			
1852	low	to	1865	high (last extreme high point)
1856	high	"	1879	high
1858	low	"	1871	low
1865	high	"	1878	low
1869	high	"	1882	low (new low)
1871	low	"	1884	low
1891	low	"	1904	high
1894	low	"	1907	high
1896	low	"	1909	high (Note: in 1909 and 1910 there were extreme high prices)
1896	low	"	1911, May	last high from which a big decline followed. Large crops both years.

1902	high	to	1916	high
1903	high	"	1916	(13 years later, a big Bull Market)
1904	high	"	1917	low (Feb. extreme high -- 13 years later -- extreme low from which a big Bull Market started;)
1908	low	"	1921	low (low of a big decline)
1910	high	"	1923	high (another big Bull campaign and extreme high)
1914	low	"	1927	high (extreme high for that period with a short crop)
1918	high	"	1931	low (first year of extreme low)
1919	high	"	1932	low (extreme low)
1920	high	"	1933	low (March. Last extreme low before big advance. 1933, July 17 high, 1946, July high)
1921	low	"	1934	high (August)
	(June & July)			
1922	low	"	1935	low (March, 1948 should be low prices)
	(February)			
1923	high	"	1936)	high
			1937)	
1937	high	"	1938	low (add 13, gives 1950-51 for low prices)

When the time of a cycle is up and the monthly trend reverses, look to see if vital angles have been broken; if they have, you can expect a big move.

GEOMETRICAL ANGLES

Remember that the geometrical angles from previous tops or bottoms will show you what cycle the market is following, and when the trend changes. The squaring out of tops and bottoms is just as important as time cycles and it shows when the trend is changing and time and space have balanced out. Therefore, consider these points in working out your forecast of Cotton for future years, as outlined above. Never overlook considering the month when the seasonal changes are due, that is, the months of March and May, August and September, and December and February.

PREVIOUS OPTIONS

It is important to move when an option crosses the high point of the previous option, or breaks the low point of the previous option that is, the high and low of the option in the previous year. Each option will work against its own previous tops and bottoms. Always consider October against its bottoms; July and the other options against their bottoms and tops. When the tops made several years back are crossed or bottoms made several years back are broken, it is very important for a change in trend.

In a Bull Market, there will not be more than two months with prices closing lower than the opening; and if it is a strong Bull Market; there will not be more than one month with lower closing, and the third month must always be higher than the opening.

Reverse this rule in a Bear Market. If a market is extremely weak or extremely strong, there is not likely to be more than three weeks or one month in which the trend will be reversed.

YEARLY TIME RULE

Watch prices between January 2 and 7. If prices start up and are higher on the 10th, they are likely to continue on up and the change in trend will not take place until about March or April, depending upon the cycle in which the market is moving.

If prices show downward trend by January 10, they are likely to continue on down until March or April, but you should follow the trend as indicated by Time Cycles and Angles.

It is very important, when the high or low prices made in January are broken by 30 points; especially in an active market, which would show an important change in trend. Remember, all rules work best in active markets.

Examples for Making Forecasts:

Judge the position on angles and the time in the cycle before deciding that an important change in trend is due.

1941 - To forecast this year check:

1881, the 60-Year Cycle

January	1290	high
May	1050	low
August	1300	high for year
September	1160	low
December	1280	high

1911, the 30-Year Cycle

January	1380	
March	1250	
June	1380	high, same as January
July	trend turned down
October	880	low for the year

1921, the 20-Year Cycle

February	1310	low
May	1520	high
June	1130	low
October	2160	high
November	1500	low

1926, the 15-Year Cycle

January	1850	high for year
April	1700	low of reaction
May	1770	high
June	1600	low of reaction.
August	1810	high, last before sharp decline in Sept., as crop was one of largets on record.
December	1250	low of year

1928, the 13-Year Cycle

February	2170	low, sharp advance followed.
June	2285	high, sharp decline followed.
September	1750	low
October	2010	high of rally
November	1800	low

1931, the 10-Year Cycle

(February		
(March	1225	high, a Bear Market balance of the year.
October	540	low (13 years from 1918 top and 15 years or 180 months from 1916 top)

1932 - 1923 - 1914, 9-Year Cycle

December	(1914)	750	low
November	(1923)	3720	high
June	(1932)	515	low
July	(1941)	1745	high

Note: In the 9th year from any top or bottom big advances or declines take place.

Check the 7-Year Cycle or 84 months back; also the 14-Year Cycle or 168 months back. 90 months or 7-1/2 years back are also important.

1942 ~ To forecast this year check:

1882, 1892, 1912, 1922, 1932 and all other cycles. Check future years in like manner.

Years of Extreme High Prices

The government control of crops during the last few years has interfered with the law of supply and demand, yet the market has followed the time cycles closely and the trend has changed when tops and bottoms have squared out. Time squares out all things and the New Deal will square out and bust between 1950 and 1954. After that the law of supply and demand will govern prices.

Going back five 20-Year Cycles or 100 years, the price of Cotton was 5 cents a pound in 1844-48 and 50 years later, in 1894-96, it again sold at 5 cents. From 1915 to 1920 high prices were recorded -- 50 to 60 years from Civil War prices.

1946 - Because this was a year of extreme high prices you should check back the master time periods or major time cycles which would run 90, 82-84, 60, 50, 40, 30, 20, 15, 13, 10, 9 and 7.

The extreme high price on Cotton was reached August 23, 1864, when it sold at \$1.89 a pound, the highest price in history. If we add 82 years to this price we get 1946, and by adding 84 years, we get 1948. Add 90 years to 1864 and you get 1954. Study the price of Cotton from 1850 to 1854 and you will find extreme low levels.

Years of Extreme Low Prices

Study 1894 to 1898, when Cotton sold at 5 cents a pound, which was 30 years from 1864. Add 90 years to 1864, and you get 1954. Therefore, the cycles indicate some extreme low prices for Cotton and, going back 20 years to 1932 and 1934, we again find extremely low prices. By checking back on the various cycles you will be able to determine when extreme high or low prices can be expected, near what months they should occur, based on previous cycles.

1943-44 to 1948 will be 50 years from 1894-1898, 30 years from 1914 and 20 years from 1954, the extreme high price years. Therefore, very low prices for Cotton will occur from 1946 to 1948, but in 1945-46 there was a big advance in Cotton which was 13 years from 1933, 9 years from 1937, and 18 years from 1928. The extreme high price was reached in October, 1946.

SECTIONS OF THE MARKET

Most all markets move in about three sections in a Bull or Bear Campaign, and they are:

1st - Accumulation or distribution.

2nd - A halting period.

3rd - Final rush to top or bottom, where distribution or accumulation takes place.

- 1925 Extreme low of the year was reached in December; then a rally to January and February, and then down again.
- 1926 Recorded the largest Cotton crop in the history of the United States. Extreme low was reached in December.
- 1927 There was a short crop. Extreme high was reached September 6 and the trend turned down.
- 1928 February was low after the high of the previous September. Then, from the low in February the market advanced, making high on June 29 to July 5, from which the trend turned down again after the government report in July, 1928. The low was reached in September; then the trend turned up and continued up the remainder of the year.
- 1929 Extreme high in the month of March; declined to July; then rallied to September, where the trend turned down again.
- 1930 Extreme low in March; then a big rally in April; then down, with extreme low for the year in December.
- 1931 February high for the year; low was reached in the latter part of May and early June; then a big rally to June 27; followed by a sharp decline, reaching bottom October 5 and 8, which was the extreme low for the year.
- 1932 June 9, extreme low for the year, from which a sharp advance followed, making top on August 28 and 29. The trend turned down in September shortly after the government report. December 3, extreme low for the year with prices around the same low as in June, 1932, some options being 20 to 30 points higher.

- 1933 The market rallied in January; made extreme low for the year in February; reached extreme high for the year on July 18. Important to note: August 18, September 9, and October 16, if bottoms are made around the same levels. A change in trend started on September 9, which was the low, with prices not quite as low as August 16; then a double bottom on October 16, very important, indicating that the trend would be up for the rest of the year, which it was.
- 1934 February 13, extreme high, with prices of the October option higher than in July, 1933. From February the trend turned down, running to May 1, when extreme low was reached. Then followed a rally to August, as you can see by your chart. This was extreme high for the year -- the October option selling at 1390. In September the main trend turned down. November, low of reaction.
- 1935 January, high of rally and high for the year.
March, sharp decline, low of the year.
May and July, high of rally.
September, low of reaction
November, high of rally.
- 1936 January, last low, slow market until May; then Bull Market started in June.
July, high for the year; trend turned down.
November, low of reaction.
- 1937 April, high for the year, October option 1395, the same top as August 1934, 32 months apart and 58 months from June, 1932 low -- two months short of 5-year cycle. Note angle from 515 at 15 points per month called top at 1380. A sharp decline followed from April 1937, with no rallies of importance. November, low 780.
- 1938 March, high of rally and high for the year.
December, low of year at 725, 20 years from 1918 and 15 years from November, 1923. Note 700 was $1/2$ of top 1400, held above and showed strong. Reason for bottom at 725 was two times 360 equals 720.
- 1939 September, high 10%. Note 20 years from 1919 top in October. November, low of reaction.
- 1940 April; high 1020, same as August 1939, and 20 years from April, 1920.
May, low of sharp reaction.
October, high of small rally.
November, low 870 on 1941, October option.
- 1941 Was slow and narrow until April; then sharp advance to July 28. October high 1746.

IMPORTANT POINTS TO WATCH

Long, Dull Periods

The market will often narrow down and hold in a narrow range for several weeks or months. This is when accumulation or distribution is taking place. Time is required to complete accumulation or distribution and for prices to square out in time from previous tops or bottoms. When the market becomes slow and dull, wait until activity starts and a definite trend is indicated; then follow it. Watch the market when any option goes 20 to 30 points under a bottom or over a top as this usually marks a change in trend. Twenty points in Cotton equals \$1.00 per bale; therefore, after the market is in a previous top trading range for a period of weeks or months, when Cotton advances 20 points above, it will be a signal for further advance. Reverse this on the downside.

Sharp Tops or Bottoms

When the range is wide, as a rule on rapid advances or declines, Cotton makes sharp tops or bottoms; then reverses quickly. See September, 1869; June, 1872; May, 1884; May, 1889; December, 1889; February, 1904; December, 1905; December, 1909; April, 1920; November, 1923; September, 1927; July, 1933; August, 1934; April, 1937; and, April and October, 1946.

In a fast advance Cotton will invariably make a sharp top and not make a double or triple top; therefore, you should use a space chart of 20-point moves up or down, or 30-point moves up or down to determine the first change in trend.

Note the sharp top of July 18, 1933, and no double top, from which a sharp decline of nearly 400 points followed. Also, note top of July 28, 1941, and sharp sell-off, July, 1946, and October, 1946.

In a very active, fast market, sharp bottoms will often be made, but as a general rule Cotton will make double bottoms or triple bottoms more often than it will make double tops.

Double Tops or Bottoms

The same levels of prices are often made many times and sometimes occur weeks, months, or years apart. Watch these old Resistance Levels for change in trend and note position on Master Chart Squares.

1871 - April	1350	Low	1900 - July	1020	High
1873 - Nov. 10	1365	"	1900 - Oct.	1020	"
1878 - Oct. & Dec.	970	"	1908 - May	820	Low
1879 - Sept. & Oct.	990	"	1908 - Oct.	830	"
1880 - Sept. & Oct.	1050	"	1909 - Dec.	1645	High
1881 - April & May	1040	"	1910 - July	1655	"
1883 - July	970	"	1912 - July	1300	"
1884 - Oct.	970	"	1912 - Dec.	1295	"
1894 - Nov.	535	"	1916 - Aug.	1290	Low
1898 - Nov.	520	"	1917 - Feb.	1395	"
			1918 - Sept.	3725	High
			1919 - July	3590	"

Triple Bottoms or Tops

The greatest advances or declines start where three tops or bottoms are made around the same level.

Note: 1873 - January, February and April, same tops.

1875 - August, October and December, same tops.

1876 - February and March -- same level -- 1480...

1877 - January 1465.

1879 - December 1480.

These same levels were made from August, 1876, to December, 1879, and never reached again until February, 1904, or 30 years from the 1874 tops.

1885 - January, February and March 1150 high.

1890 - April 1140 high. Not reached again until 1903.

In a long, Bull or Bear Cycle, important tops or bottoms continue to be made at lower or higher levels.

1907 - July, August and September -- same levels -- 1300.

1909 - December 1645 -- 1910, July 1655;
1911, May 1615, -- triple tops

Triple tops years apart always mean a very rapid decline to

The last important triple top occurred on October Cotton in September, 1918, October, 1919, and April, 1920 when it sold at the same price -- 3725. After that it declined to around 11 cents in a little less than a year.

Triple tops -- whether Daily, Weekly or Monthly -- work the same. When prices reach the same level the fourth time, they nearly always continue on, but failing to get above the old tops, or to break old bottoms, the fourth time is a very strong indication for a reverse move. The Master Chart shows why tops and bottoms occur at the same level.

Old Tops and Bottoms

You should watch the last high for one, two or even three years or longer. When the market crosses these highs of previous years, it generally indicates much higher prices. In the same way watch the yearly bottoms and, then, when they are broken by 20 or 30 points, it generally means a change in the major trend and much lower prices.

The greater the time period between old tops and old bottoms the greater the decline or advance will be when bottoms are broken, and tops are crossed. Remember, for a market to give a definite indication it must not only go below old bottoms or above old tops, but IT MUST CLOSE ABOVE or BELOW these OLD LEVELS at the end of the day, week or month. CLOSING PRICES ARE VERY IMPORTANT TO WATCH!

Tops often become bottoms and bottoms become tops. When old tops -- which have been resistance levels for some time -- are crossed, they will then be support and buying points on reactions. When old bottoms are broken by 30 points, it shows a reversal in trend and they become resistance levels or selling points on rallies.

Closing Levels

In a very fast, active market, when prices are at extremely high levels around 30 to 40 cents per pound, the market will have to advance or decline 50 to 60 points, and close this much above or below old tops or bottoms to indicate a change in trend.

CHANGES IN SEASONAL TREND

Cotton has important seasonal trends which occur at about three different periods in the year, and they are:

1. The first important period for a seasonal change in trend is the planting season, which begins in March and runs to the end of May.
2. The next important seasonal change is the maturity season, which is August and September.
3. The third important season is the harvesting season, which runs from August to December. The heaviest ginning is usually during the months of October and November, with the final weight of the crop culminating in the first half of December.

April 6 to 17 and May 5 to 10

This is a very important period for a change in trend and very often important for a bottom from which the main trend turns up because by this time professional traders are able to determine something about the number of acres that have been or will be planted. Consider the time from last top or bottom.

July and August

Those are the most important months when crop scares develop and the market becomes very active. The government reports which occur around the 8th of the month often start an important change in trend. It is always very important to study your charts carefully just before a government report as they will indicate whether accumulation or distribution is taking place, and the change will come after or just before the government report. As a rule, the change in trend comes after the report is out.

September 6 to 20

The most important change of trend in the year and the one that you can always make a lot of money on. The change usually occurs between September 6 and 20. If the market is low at this time and the trend turns up, it runs up until the latter part of November or December. If the market has been advancing and the trend turns down in September, it will generally run until October and possibly into December.

A man who sticks to this rule and watches the change in trend in September, can make a fortune. Then, watch the next change in December, when Cotton as a rule is bottom. Selling short in September and buying in December for the Spring rise will average out a large profit. September crop reports usually come around the 8th to 10th, and at this time of the year it is generally well known about what size the crop will be, although there are years when damage occurs in September or October, or the crop improves in September and October.

October 10 to 20 and November 15 to 30

Always watch these periods for changes in trend.

December 10 to 15 Most Important

Around this time the final crop estimate is made by the government and the heavy movement of Cotton to the market is about over. Therefore, if the crop has been large, prices will reach bottom around December 10 to 15, when you can cover shorts and buy for a substantial rally. If you will go over a long number of years, you will find that the average lows have been made in December, although lows do occur in some years in October or November.

When the crop is extremely short, the trend will often turn up in September and prices go against the seasonal trend and make top in late November or early December. Example:

1923 - The crop was extremely short. Last low level was reached on July 30 and the extreme high of the year on November 30. The market advanced 1700 points or 17 cents a pound in four months. After this the trend turned down on December 1 and prices were down 10 cents a pound in 60 days.

STUDY and COMPARE all years of extreme high prices and years of extreme low prices. In this way you will learn how prices move at extreme levels.